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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,701	12/26/2001	Koji Matsuo	KOJIM-443	7507

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EXAMINER

HOFFMANN, JOHN M

ART UNIT PAPER NUMBER

1731

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,701

Applicant(s)

MATSUO ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2, 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 April 2005 has been entered.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1731

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara 6587262 alone or in view of Hiraiwa 6189339.

Steps a) -c) see col. 8, lines 42-47 and Example 2 starting at col. 15 of Fujiwara.

It is noted that Fujiwara does not indicate that the substrate/target is rotateable. It is noted that anything can be rotated given a large enough twisting force. Furthermore, figure 4 reasonable suggests such can be done. Examiner gives official notice that such is typically done in the VAD process.

Step d). First it is noted that the glass is already vitreous – so it cannot under go a step of “vitrifying”. One cannot vitrify what is already vitreous. It is deemed that the broadest reasonable interpretation of “vitrifying” (i.e. that is consistent with the claims) is that it means “converting it to a glass”. It is deemed that Fukiwara’s heating with fluorine *coverts* the glass into a fluorine containing gas. The heating and vitrifying (converting) is disclosed in Example 2.

Art Unit: 1731

Step e): col. 16, lines 11-14 discloses cutting the ends. As to removing the outer diameter: col. 9, lines 48-54 discloses cutting and polishing. It would have been obvious to reduce the diameter of the ingot – depending upon the desired size of the lens.

From MPEP 2144.04

B. Changes in Shape

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

From MPEP 2144.04

A. Changes in Size/Proportion

In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Alternatively, one can use Hiraiwa reference: Col. 8, lines 42- 67 discloses removing the outer periphery so as to removed the curved striae so that all striae are perpendicular to the incident light so as to obtain high resolution without deterioration of optical performance. It would have been obvious to remove any outer portion of the

Art Unit: 1731

Fujiwara preform (as taught by Hiraiwa) so as to create lenses with high resolution without deterioration of optical performance.

Step e) Fujiwara (col. 9, line 50). It is noted that the claims do not require that the steps have any particular order. Further, the order of shaping the glass is generally not a patentable distinction.

From MPEP 2144.04

C. Changes in Sequence of Adding Ingredients

Ex parte Rubin , 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also In re Burhans, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); In re Gibson, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.).

Claims 2 and 12-15: it would have been obvious to remove as much or as little glass as desired – with no new or unexpected results.

Claim 10: Fujiwara, col. 16, line 9.

Claim 11 is clearly met.

Claims 1-2 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraiwa 6189339 in view of Fujiwara 6587262.

Claim1, step a): see figure 5 of Hiraiwa.

Art Unit: 1731

Steps b) and c) see col. 4, line 53-54 of Hiraiwa. However, there is no indication that it is a porous matrix of step c) which is created.

Step d) is not taught.

Step e) the removal of ends and periphery is shown at figures 1A- 1B. of Hiraiwa. However, the 5% and 2.5% limitations are not disclosed.

Step f) see col 3, lines 33-37 and figure 1C of Hiraiwa.

(The above features are also disclosed at other portions in Hiraiwa).

As to step e) – it would have been obvious to remove as much material as one desires – depending upon how large of a lens one desires.

As to the deficiencies of steps c) and d): The secondary reference Fujiwara discloses the same sort of process (see figure 4 of Fujiwara) and final product as the primary reference. Fujiwara also disclose that sintering a porous glass body in a fluorine-containing atmosphere, that one will then dope the body with the fluorine which in turn will suppress the absorption band near 160 nm (specifically see col. 9, lines 1-7 and example 2 which starts at col. 15 of Fujiwara.) Also, col. 8, lines 38-41 discloses that they created an optical member that has high transmittance for wavelengths less than 190 nm for the first time. It would have been obvious to alter the Hiraiwa process so that the glass body is initially a porous body, and then treat it in an fluorine atmosphere so as to dope it with fluorine (as taught by Fujiwara) so as to increase the transmission properties – as taught by Fujiwara.

Art Unit: 1731

Alternatively or additionally: It would have been obvious to alter the Hiraiwa process so that the glass body is initially a porous body, and then treat it in a fluorine atmosphere so as to dope it with fluorine (as taught by Fujiwara) so as to have create glass that can transmit light under 190 nm.

Claims 2 and 12-15: it would have been obvious to remove as much or as little glass as desired – with no new or unexpected results.

Claim 10: Fujiwara, col. 16, line 9.

Claim 11 is clearly met.

Claims 1-2 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiraiwa 6189339 in view of Fujiwara 6587262 and Yamagata 5325230.

See how the Hiraiwa and Fujiwara are applied above. Yamagata is also cited as showing it is known to remove peripheral portions so as to get a “highly homogeneous” blank (Col. 24, lines 29-31) see also figure 7 and 8A. Feature 2B of figure 8A shows that the center portion 2B would be more homogeneous than the outer portions. Thus it would have been obvious to exclude outer portions which have steeper slopes of gradients – and use only the inner more homogenous region.

Response to Arguments

Applicant's arguments filed 22 April 2005 have been fully considered but they are not persuasive.

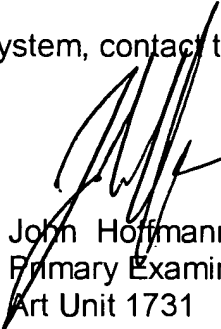
It is argued that Fujiwara teaches two methods: VAD and the direct method (true). And that Fujiwara also teaches that the VAD method has defects problems, that there is no disclosure that the (VAD) defect problem exists in the direct method, and therefore there is no basis to modify the Hiraiwa direct method, based on a VAD defect problem. This does not appear to be relevant because the rejection relies on different reasons for combining the references. Comparing col. 6, lines 38-41 with col. 8, lines 38-41 (both of Fujiwara): there are two methods – the first is directed to glass for the 190-250 nm range; the second is directed to the less than 190 nm range. It is the Office's rejection is not based on overcoming a problem (as Applicant suggests). Rather, the rejection is based on improving the Hiraiwa method so that one can transmit wavelengths less than 190 nm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Hoffmann
Primary Examiner
Art Unit 1731

4-28-05

jmh